PRELIMINARY ASSESSMENT

of the

Anderson Company, Inc.

December 3, 2013

Prepared By: Maryland Department of the Environment
Land Management Administration
1800 Washington Boulevard
Baltimore, MD 21230

Prepared For: U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

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1.0 INTRODUCTION

1.1 Authorization

This Preliminary Assessment (PA) was conducted by the Maryland Department of the Environment, Land Management Administration, Land Restoration Program (MDE) under a Cooperative Agreement with the U. S. Environmental Protection Agency (EPA) using the authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA).

1.2 Scope of Work

MDE's NPL/Site Assessment Section was contracted to conduct a PA of the Anderson Company, Inc. (Anderson Co.) site. The objective of this investigation was to collect information concerning conditions at the Anderson Co. site sufficient to determine the presence or absence of human health and/or environmental hazards at the site and to determine whether further environmental actions at the site are warranted. This PA is not designed to determine the lateral or vertical extent or all locations and types of environmental hazards at the site.

The scope of the PA involves conducting a historical site review to determine past activities and processes that are potential sources of contamination. Furthermore, it involves a review of currently available regulatory records relating to the property and vicinity to identify documented releases of chemicals and determine past operating practices in handling hazardous waste substances and wastes related to site operations.

1.3 Executive Summary

This Anderson Co. site is listed as a Level II Priority facility (operated for 50 years or more) in the June 2008 *Maryland Dry Cleaner Initiative Report*. Dry Cleaning operations began sometime prior to 1951 according to the Hagerstown 1926-1951 Sanborn Fire Insurance map sheet 4a. On April 17, 1994, Anderson Co. transferred the business to We Kare, Inc. that was run by Wendy Tirpok. A December 20, 2000 news release from the Office of Maryland Attorney General J. Joseph Curran Jr., indicated that the dry cleaner closed for bankruptcy on November 24, 2000. The property was sold to the adjacent Hagerstown Day Nursery on June 1, 2001. According to a telephone conversation with a nearby business owner, the building was razed sometime in 2003. The Hagerstown Day Nursery currently utilizes the former dry cleaner site as a playground.

The site is located in central downtown Hagerstown at 102 E Washington Street. Residential properties with some commercial businesses are situated to the north, east and south. Commercial properties predominate to the west, some light industry exists to the southwest. All of the residents and businesses within the Hagerstown City limits are supplied by municipal water and sewer service. There are four wellhead protection areas within a two-to-four mile radius of the site. Shallow groundwater flow is determined by the joints, fractures and solution

Figure 1 Site Location Map (via Google Earth®)

channels within the karst limestone and dolomite bedrock that dominates the geology in the Hagerstown Valley.

Several addresses for the site were identified in the June 2008 *Maryland Dry Cleaner Initiative*, including 104-110 E Washington Street. Sheet 4a of the Hagerstown 1926-1951 Sanborn Fire Insurance Map identifies 110 E Washington Street as "Anderson Apt's." The September 6, 2012 pre-CERCLIS Screening Letter Report for this site identified the apartments located at 110 E Washington Street as the former Anderson Co. dry cleaner site. As indicated above, 110 E Washington Street operated as an apartment building since sometime prior to 1951. The former dry cleaner building was razed sometime in 2003 and the property was bought by the Hagerstown Day Nursery and is used as an expanded outdoor play area for the children at the school.

There are no known records of Phase I or II environmental studies having been done for the site. Due to the site history and lack of assessment information, further investigations of the site and surrounding area was recommended during the pre-CERCLIS stage of the investigation.

It should be noted that during a November 1, 2013 telephone conversation with a nearby business owner it was revealed that the former Troy Laundry, that operated at what is now identified as St. Elizabeth Square apartment building at 55 E Washington Street, was razed sometime in the late 1960s or early 1970s. During that conversation it was indicated that the former Troy Laundry had six 1,000 gallon vertically installed underground storage tanks that were removed during the razing. The Troy Laundry was identified in the June 1907 C&P Telephone book and was incorporated on April 28, 1911.

2.0 SITE DESCRIPTION

Anderson Co. was located at 104-108 E Washington Street in central downtown Hagerstown. Most of the properties to the north, east and south are residential with some commercial properties included. Commercial properties are dominant to the west with a few industrial properties located to the southwest. The site was located in a relatively flat area at approximately 540 feet above mean sea level in Congressional District 6. Overland flow is directed to the City sewer system that discharges into the Antietam Creek approximately ¾-mile to the southeast. The geographic coordinates are latitude 39.640699° north and longitude -77.717828° west. The Maryland grid coordinates are approximately north 659,125 feet and east 598,125 feet.

The playground area likely consists of fill soil brought in after the former dry cleaning facility was razed sometime in 2003. Currently, the playground area is mostly grassy and lined by short evergreens along the fence line to act as a blind. A mulched area with a "jungle-gym" type apparatus is situated near the edge of the playground along E Washington Street.

MDE well database records indicate that a limited number of domestic wells are still in use within a four-mile radius of the site. The closest domestic source well is located over one mile away from the site. The closest farm well is estimated to be approximately ½ - one mile from the site. The locations of the individual domestic wells are grossly estimated and the estimated populations and areas that they serve are detailed in Table 2.

Table 2 Domestic Wells Within 4-Mile Radius

Distance from Site (Miles)	Number of Domestic Wells	Estimated Population Served *	Estimated Number of Farm Wells
0 – 1/4	0	0	0
1/4 – 1/2	0	0	0
1/2 – 1		0	1
1 – 2	59	149	1
2 – 3	104	263	4
3 - 4	208	526	9
TOTAL	**371**	**938**	**15**

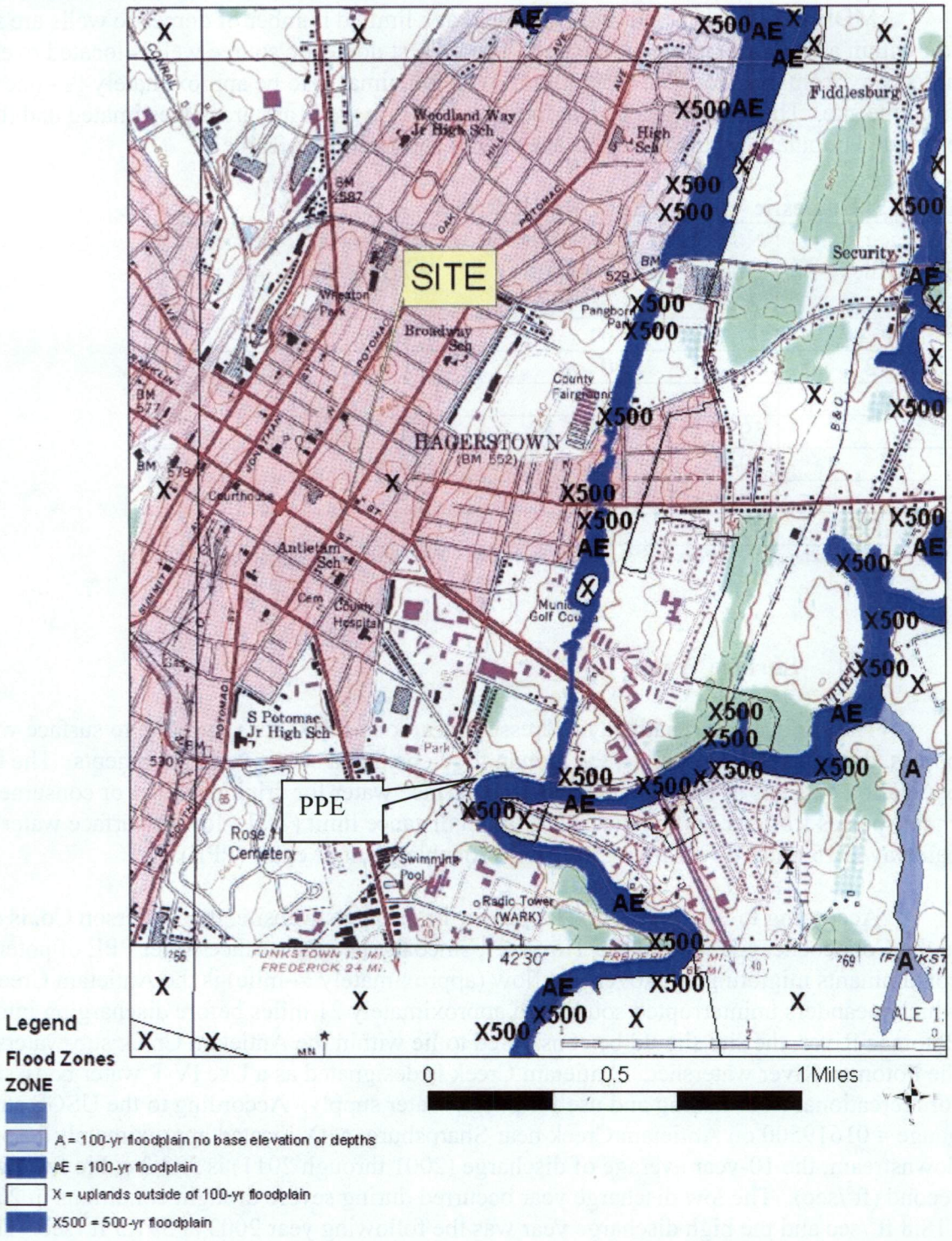
* http://quickfacts.census.gov indicates 2.53 persons per household in Washington County (Census data 2007-2011)

3.2 Surface Water

The surface water pathway addresses hazardous substance migration to surface water bodies, drinking water supplies, the human food chain and sensitive environments. The target population consists of those people who use surface water for drinking water or consume food chain species from target fisheries. The target distance limit (TDL) for the surface water pathway is 15 miles downstream from the probable point of entry (PPE).

According to EPA's EnviroMapper for Envirofacts website, the Anderson Co. is situated in the Conococheague watershed. However, since the nearest surface water PPE of potential contaminants migrating with overland flow (approximately ¾-mile) is the Antietam Creek, which meanders uninterrupted southward approximately 21 miles before discharging into the Potomac River, the site should be considered to lie within the Antietam Creek sub-watershed of the Potomac River watershed. Antietam Creek is designated as a Use IV-P water body suitable for recreational trout fishing and use for public water supply. According to the USGS stream gauge # 01619500 on Antietam Creek near Sharpsburg, MD, located approximately 17.5 miles downstream, the 10-year average of discharge (2001 through 2011) is 333.3 cubic feet per second (ft^3/sec). The low discharge year occurred during severe drought conditions in 2002 at 118.8 ft^3/sec and the high discharge year was the following year 2003 at 591.3 ft^3/sec. The 15-mile surface water TDL terminates some 2.5 miles upstream from this gauge. The site lies outside of the 500-year floodplain (Figure 5).

Figure 5 Eastern Hagerstown Floodplain Map



There are palustrine emergent (PExxx) and open water (POxxx) wetlands located to the north of the PPE. Open water riverine wetlands (R5OWH) exist along the entire surface water 15-mile TDL associated with Antietam Creek (see Fig. 6).

Table 1 Property Ownership

Year	Liber/folio	Grantor	Grantee
5/1/2001	1651/0047	David E. Roy	Hagerstown Day Nursery
3/14/1986	805/562	Hagerstown Aerie #694 Fraternal Order of Eagles	David E. Roy
3/29/1979	678/525	Scott Hoffman	Hagerstown Aerie #694 Fraternal Order of Eagles
6/27/1973	563/9	Harry Edward Anderson	Scott Hoffman
3/31/1920	157/354	Edith and Charles Spalding	Harry Edward Anderson

2.2 Permitting and Regulatory Actions

The September 2012 PCSLR indicated that MDE's Air and Radiation Management Administration's files were destroyed per file retention protocol. No date was provided for when the files were destroyed. MDE's Oil Control Program case #99-1795 involved the removal of one 500-gallon UST that contained Varsol. The file did not indicate if the UST was empty at the time of removal. The file did indicate that there was no evidence of leakage. EPA's EnviroMapper website does not list any permitted facilities as being located on or adjacent to the property.

2.3 Previous Investigations and Remedial Actions

There have been no known previous investigations of the property at this time.

2.4 Analytical Results

There are no known records of prior analytical data for the site at this time.

3.0 ENVIRONMENTAL SETTING

The pathways addressed in the PA are groundwater, surface water, soil and air. Targets are physical or environmental receptors that are within the target distance limit for the pathway. A primary target is designated as one with a high likelihood of exposure to a hazardous substance and a secondary target is designated as one with a relatively low likelihood of exposure to a hazardous substance.

3.1 Water Supply

Drinking water for the Hagerstown area residents is supplied primarily by the (b) (b) (9), a surface water plant located on (b) (9) Secondary sources of municipally supplied water come from (b) (9) as well as smaller municipal systems in the nearby towns of Funkstown, Boonsboro and Clear Spring.

In Hagerstown, storm water drainage is generally through an extensive network of underground conduits; site-specific drainage flows directly to Antietam Creek via a combination of this system and overland flow. There are four wellhead protection areas within a four-mile radius of the site.

Figure 4 Wellhead Protection Areas Within Four-Mile Radius

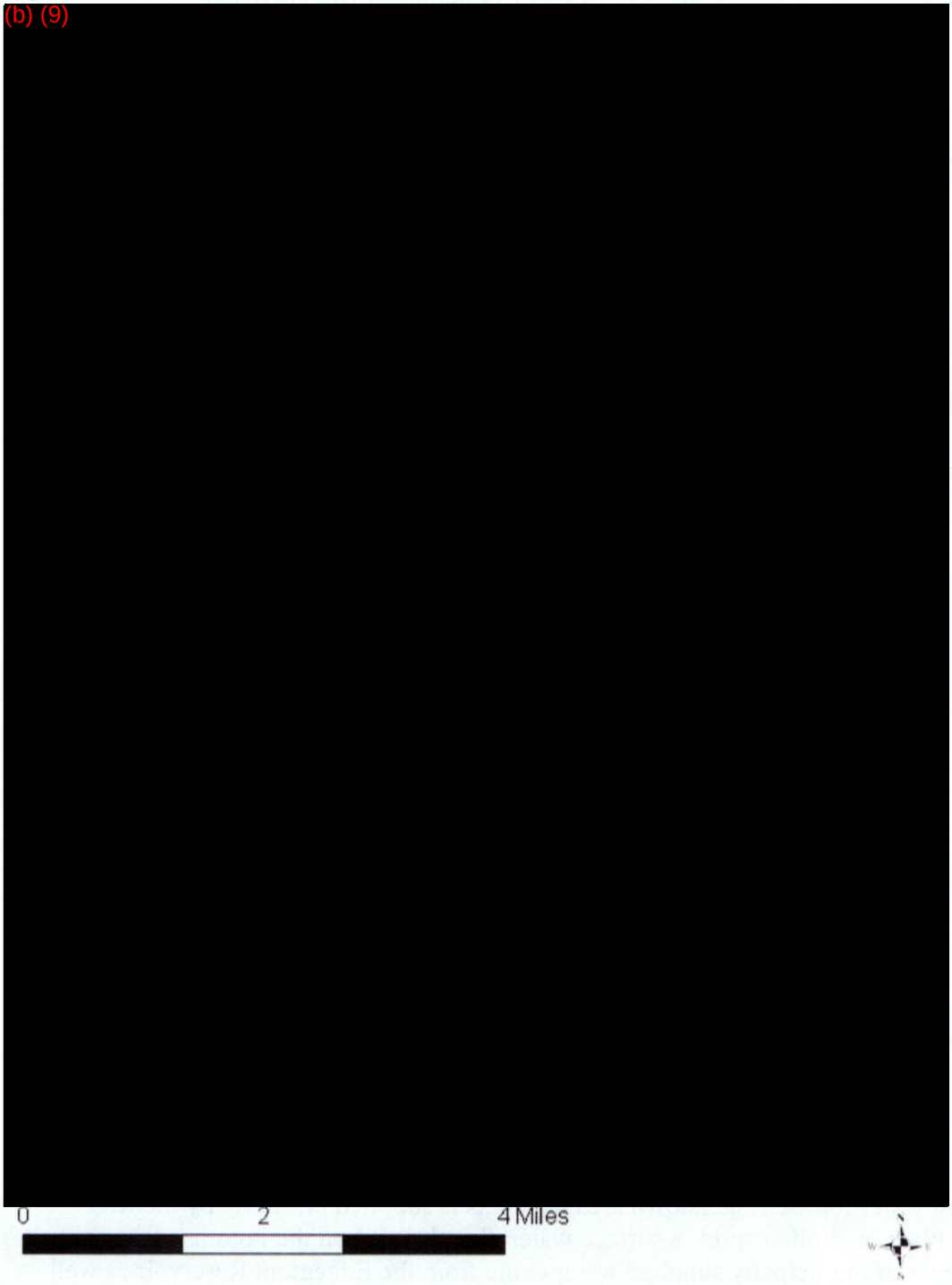


Figure 2 Cropped 1953 (photo revised 1985) Hagerstown Quadrangle 7.5-Minute Topographic Map

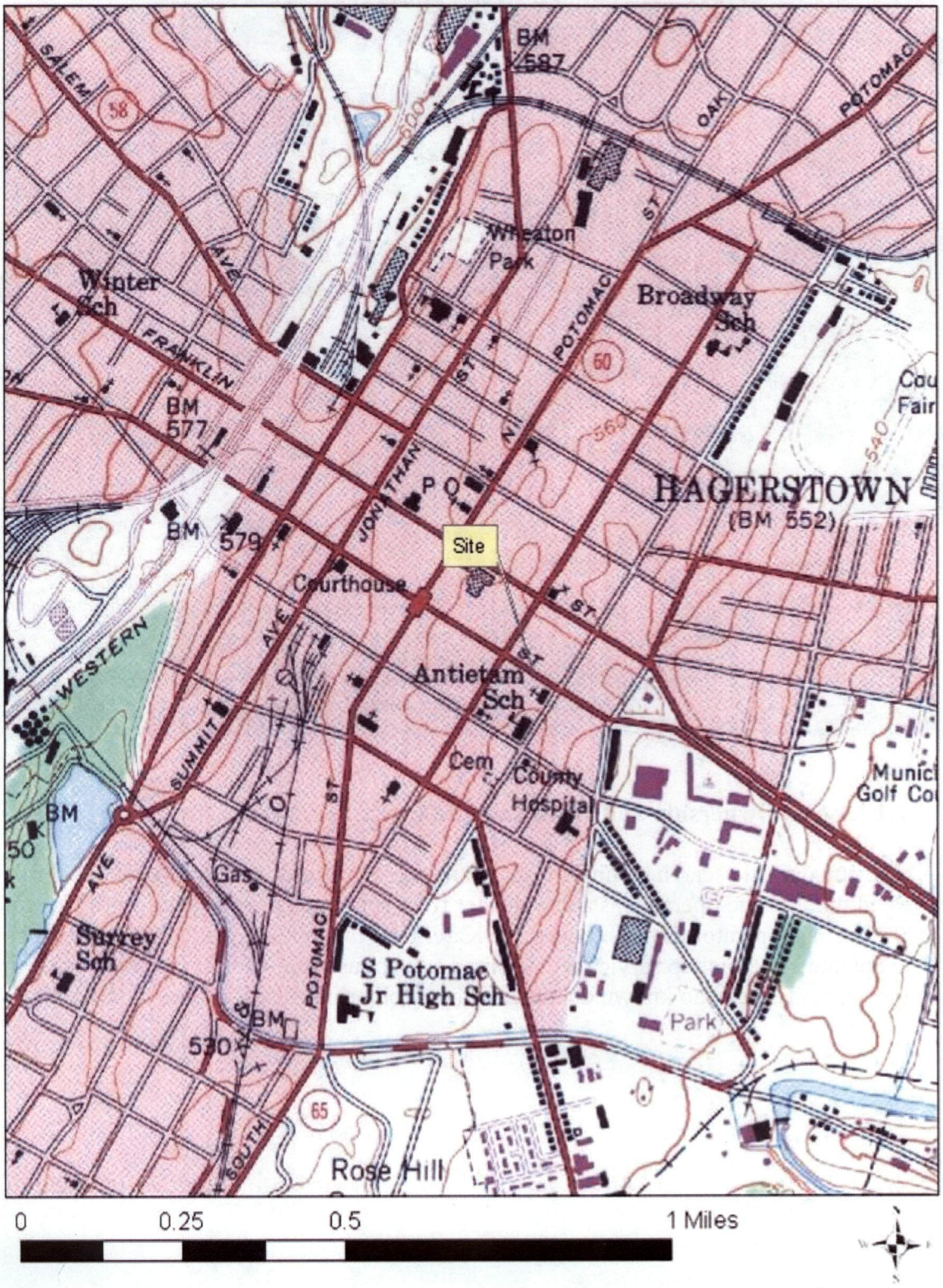
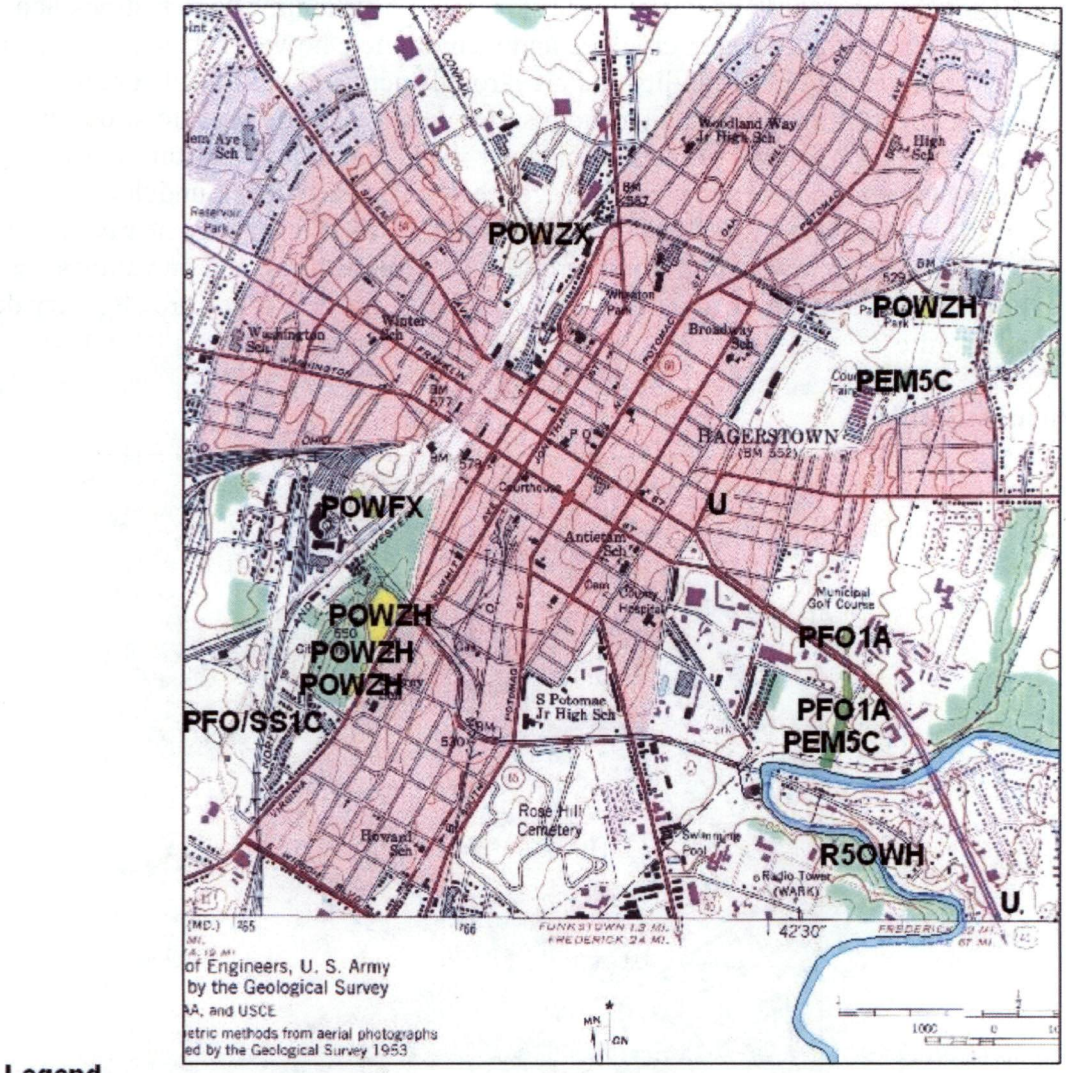


Figure 3 Aerial View (Google Earth®)

2.1 Site Ownership and Historical Site Use

The cursory title search results are shown in Table 1. Results of investigations for this PA revealed that the site operated as a dry cleaner from sometime prior to 1951 until November 24, 2000. The last operator of the site was We Kare, Inc. It is not known, however, if the site at that time operated as a pickup service with limited solvent use (pre-spotting) or conducted dry cleaning on site. There is no known documentation of chlorinated solvent use at this site.

Figure 6 Vicinity Wetlands Map

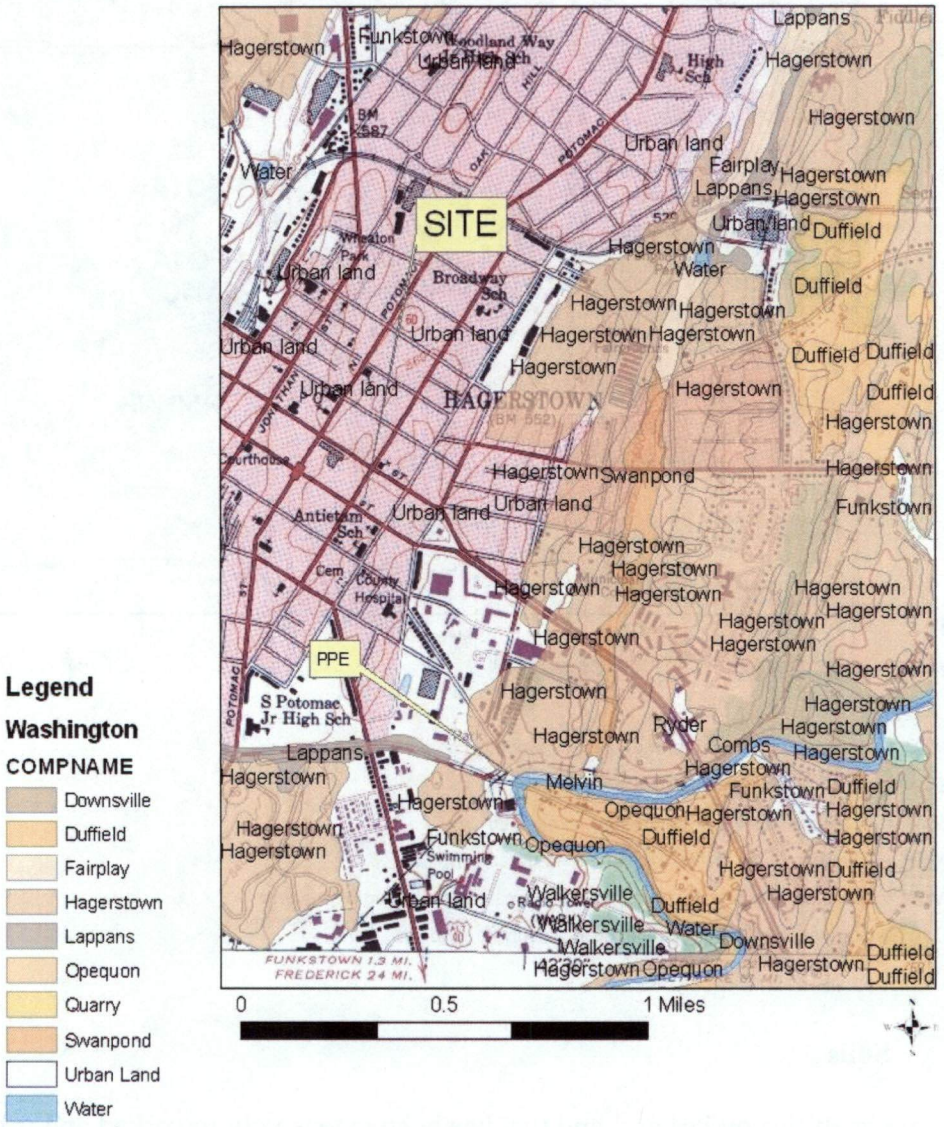


3.3 Soils

The site itself lies on Urban Land that has been extensively reworked and is occupied by buildings and structures or covered by asphalt, concrete, and other impervious surfaces. It is

dominantly nearly level and gently sloping. The nearest natural soil series is the Hagerstown series to the north, east and south of the site. The Hagerstown series soils are nearly level and gently sloping. They are on ridges and narrow side slopes and overlie limestone bedrock at a depth of more than 60 inches. They are very deep and well drained, however they may exist as silty clay with slow to moderate permeability and are strongly acidic to neutral. The thickness ranges up to seven feet. Also nearby is the Duffield series which is nearly level to strongly sloping, very deep, well drained soils formed dominantly in residuum derived from limestone; on ridges and in narrow valleys. These soils are on ridges that have nearly level, undulating to strongly sloping side slopes. They are also in narrow valleys. Duffield soils are nearly level to strongly sloping. They are on lower ridges, in narrow, undulating valleys, and on valley sides. These soils overlie limestone bedrock at a depth of more than 60 inches. They are also very deep and well drained (Figure 7).

Figure 7 Vicinity Soil Map



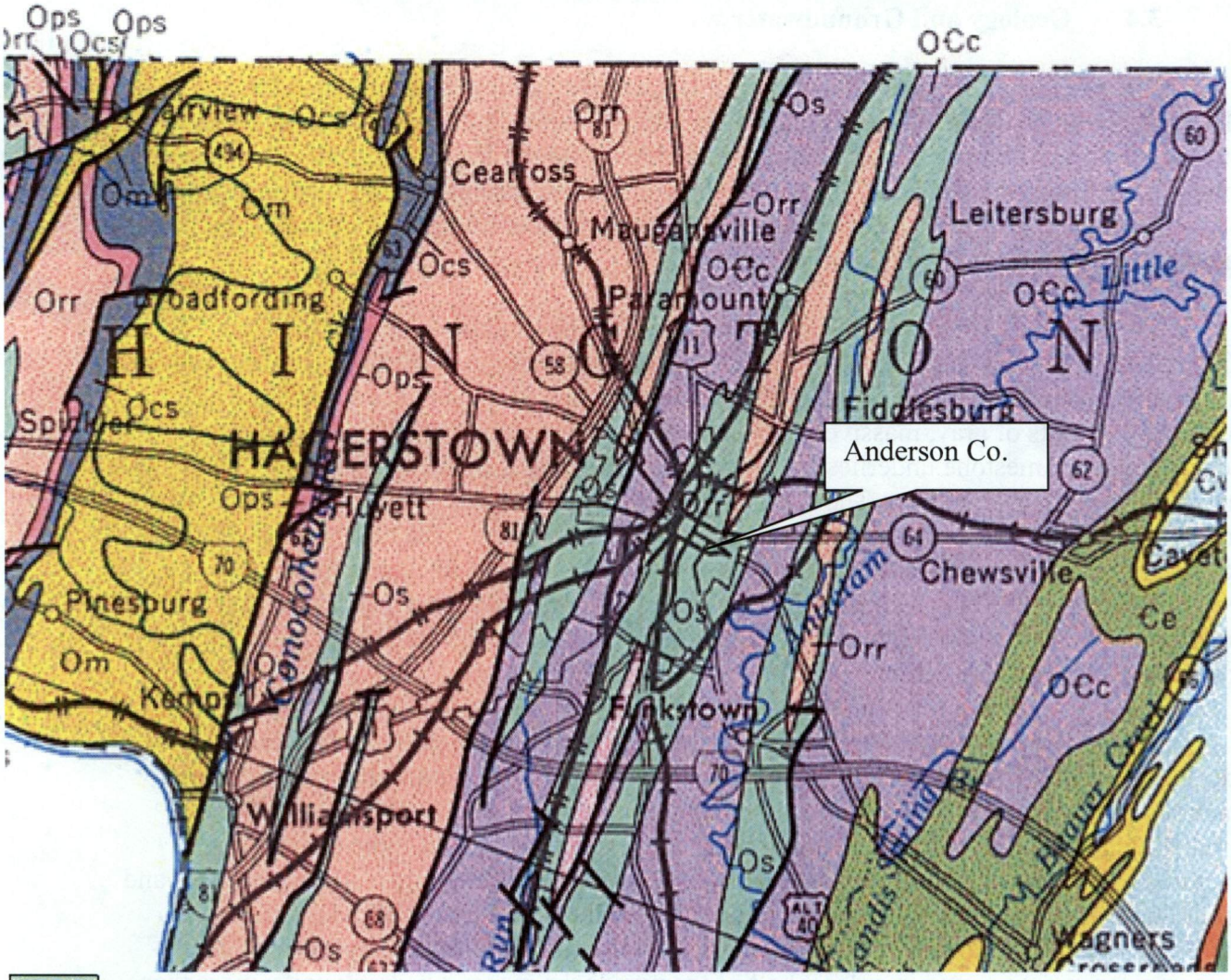
3.4 Geology and Groundwater

The site lies in the wide, flat and open Hagerstown Valley, also known as the Massanutten Syclinorium, a broad synclinal structure comprised of highly contorted Ordovician and Cambrian aged limestones and dolomites that make up the Valley and Ridge Province. Numerous folds, faults and karst features such as sinkholes, springs and dissolution channels of the carbonate rocks of this region and the lack of overlying confining beds increases the potential hazard for groundwater contaminant migration.

The site is underlain by the Ordovician Stonehenge Limestone that ranges from 500' to 800' in thickness in the Hagerstown Valley. The upper part of the Stonehenge consists of gray, thin-bedded, coarse-grained oolitic limestone with abundant flat pebble conglomerate. The lower part consists of gray, massive, fine-grained limestone. The Ordovician-Cambrian Concocheague Limestone underlies the Stonehenge and ranges in thickness from 2,000 to 2,600 feet in the Hagerstown Valley. The Conococheague is predominately a dark blue, laminated limestone with interbeds of shale, sandy dolomite and sandstones. The nearby Rockdale Run Formation stratigraphically overlies the Stonehenge and ranges in thickness from 1,700 to 2,500 feet in thickness. The upper third of the Rockdale Run consists of cherty dolomite and dolomitic limestone. The lower two thirds consists of cherty limestone with interbeds of dolomite and oolitic limestone (Figure 8).

About 89 percent of the Hagerstown Valley is underlain by carbonate rocks. These rocks are characterized by tertiary porosity and permeability, that is, ground water moves through fractures and bedding-plane separations that have been enlarged by dissolution of rock by circulating ground water. The remaining rocks (shale, sandstone, and some diabase) are fractured to varying degrees but not susceptible to dissolution. More than 50 known caves and about 200 wells intersecting cavernous zones attest to the development of caverns in the carbonate rocks of Hagerstown Valley. Naturally-occurring dolines (sinkholes) with gently-sloping sides may be found in at least half of the two dozen mapped bedrock units; more than one quarter of them formed over the Chambersburg Limestone, which makes up only about 1 percent of the bedrock area. More than 190 springs in the Hagerstown Valley are point-discharge sites for ground water; only 4 of these discharge from the Chambersburg Limestone. Much ground water discharges diffusely to streams. Geologic structure is the dominant control on ground-water flow of the Hagerstown Valley: Bedding-plane separations and strike-parallel joints direct ground-water, under the driving force of the hydraulic gradient, to flow parallel to the strike of bedding (generally toward the north-northeast or toward the south-southwest). Joints and cross faults direct ground-water flow at some locations.

Figure 8 Generalized Geologic Map (from MGS 1968 Generalized Geologic Map)



Os Stonehenge Limestone: Upper part gray, thin-bedded, coarse-grained to conglomeratic, oolitic calcarenite; some dolomite; lower part gray, thick-bedded, fine-grained algal limestone; thickness s500 to 800 feet.

Orr Rockdale Run Formation: Upper one-third gray, mottled cherty dolomite and dolomitic limestone; lower two-thirds gray, cherty argillaceous calcarenite and algal limestone with interbedded dolomite and oolitic limestone; thickness at least 1,700 feet east of Conococheague Creek, increases to about 2,500 feet in west.

OCc Conococheague Limestone: Dark blue, laminated, oolitic, argillaceous and siliceous limestone, algal limestone, and flat-pebble conglomerate; siliceous shale partings; some sandstone and dolomite; thickness 1,6000 to 1,900 feet.

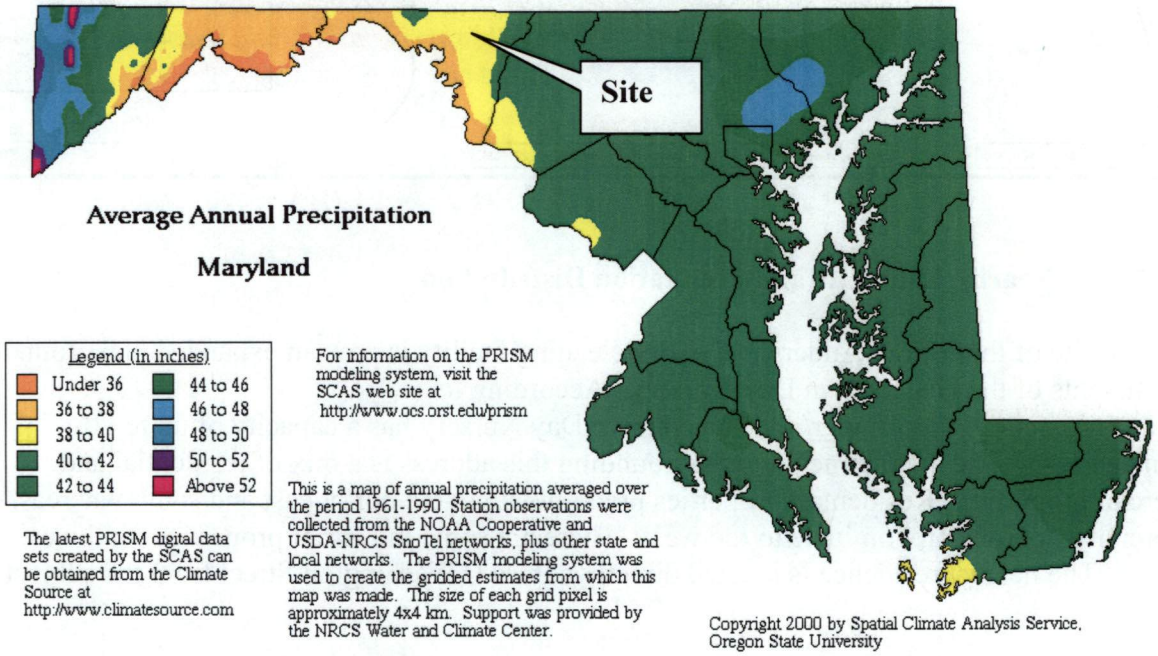
3.5 Meteorology

Hagerstown has a continental type of climate with well-defined seasons. It lies in a transition zone between a humid continental climate (with warm summers) to the north and west and a humid subtropical climate zone to the immediate south. Both zones influence the climate of Hagerstown.

The average annual temperature in Hagerstown is 53.3 degrees Fahrenheit (°F) and varies moderately with the seasons. The coldest part of the year falls in the month of January with a monthly average low temperature of 21.3 °F. There are on the average 116 days that have average temperatures below 32 °F. The warmest month of the year is July with an average high temperature of 86.8 °F. Eleven days have an average temperature greater than 90 °F. There are on the average 163 days in the area's growing season (frost-free).

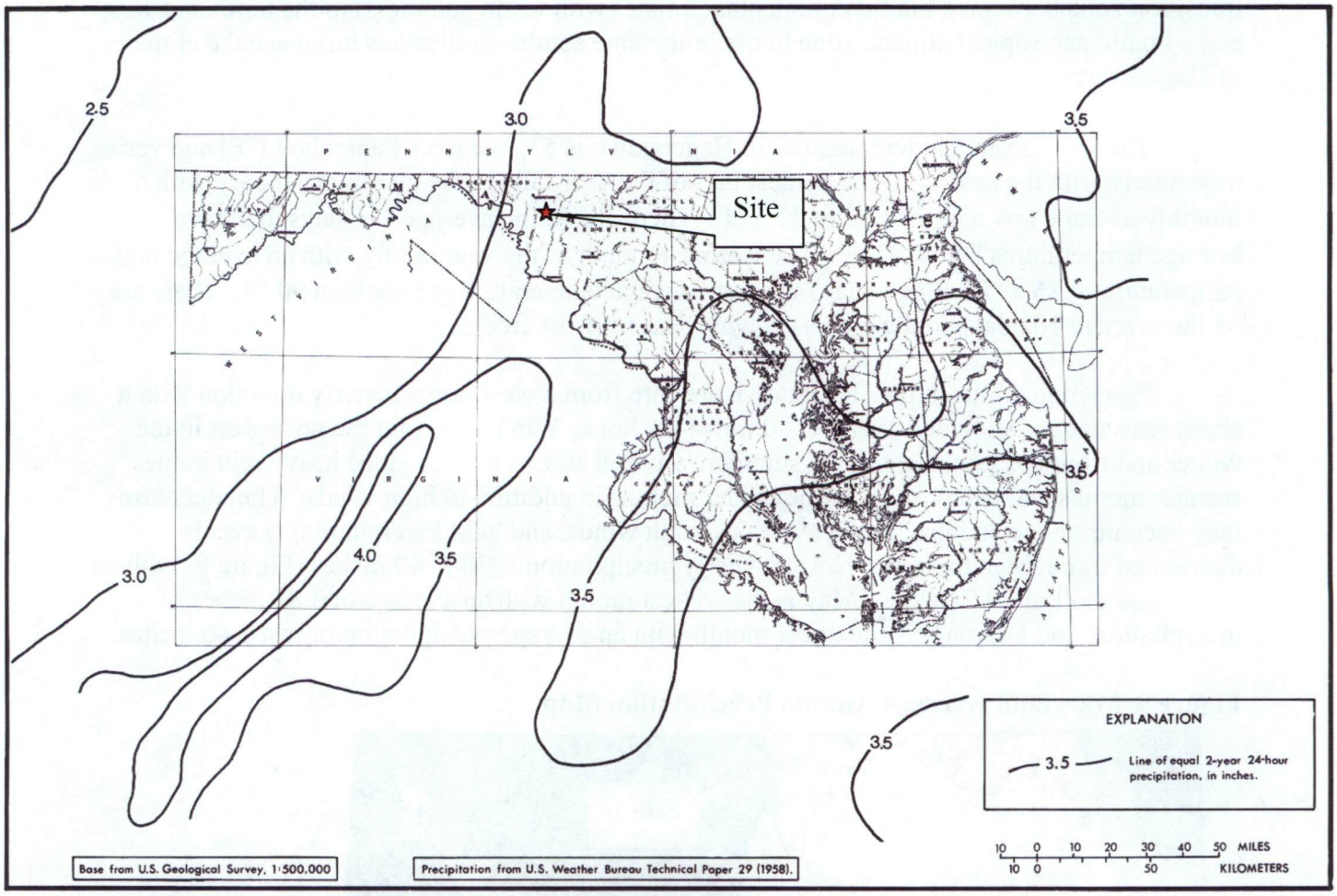
Prevailing winds in the Hagerstown area are from a west-northwesterly direction with a slight seasonal variation and average 7.0 miles per hour. Winds are from the northwest in the winter and from the southwest in the summer. Coastal storms may produce heavy rain in the warmer months and heavy snow in the colder months in addition to high winds. Thunderstorms may become severe and produce heavy rains, high winds, and hail. Precipitation is evenly distributed throughout the year. Normal yearly precipitation is 38 to 40 inches (Figure 9) with an annual snowfall of 29.7 inches. May is the wettest month with an average of 3.87 inches of precipitation, and February is the driest month with an average precipitation of just 2.46 inches.

Figure 9 Maryland Average Annual Precipitation Map



The average 2-year 24-hour rainfall is approximately 3.25 inches (Figure 10).

Figure 10 2-Year 24-Hour Rainfall



3.6 Nearby Land Use and Population Distribution

The site of the former Anderson Co. dry cleaning facility is now an expanded playground for the students of the Hagerstown Day Nursery. According to www.education.com/schoolfinder/ the Hagerstown Day Nursery has a capacity of up to 20 children ages 2-5. The area immediately surrounding this address is a mix of residential and commercial properties. Residential properties predominate to the north, east and south whereas, commercial properties predominate to the west. There are some industrial properties southwest of the site. The nearest residence is located directly across E Washington Street from the subject site.

The target distance limit for the soil exposure pathway is 200 feet for resident population and one mile for the nearby population. The pathway for soil exposure accounts for the potential threat to people on or near the site who may come into contact with exposed materials and areas of suspect contamination. This includes both ingestion and dermal exposure.

The site is located in an urban residential/commercial area within Hagerstown in west central Maryland. There are a number of residential buildings within 200 feet of the site as shown in Figure 12 below, and there is an estimated population of 17,508 people residing within one mile of the site.

The target distance limit for the air exposure pathway is a four-mile radius around the site divided into incremental distances. The air pathway accounts for hazardous substance migration, in gaseous or particulate form, through the air. Airborne deposition is a potential threat to people and sensitive environments. Target populations consist of people who reside, work or go to school within the target distance limit.

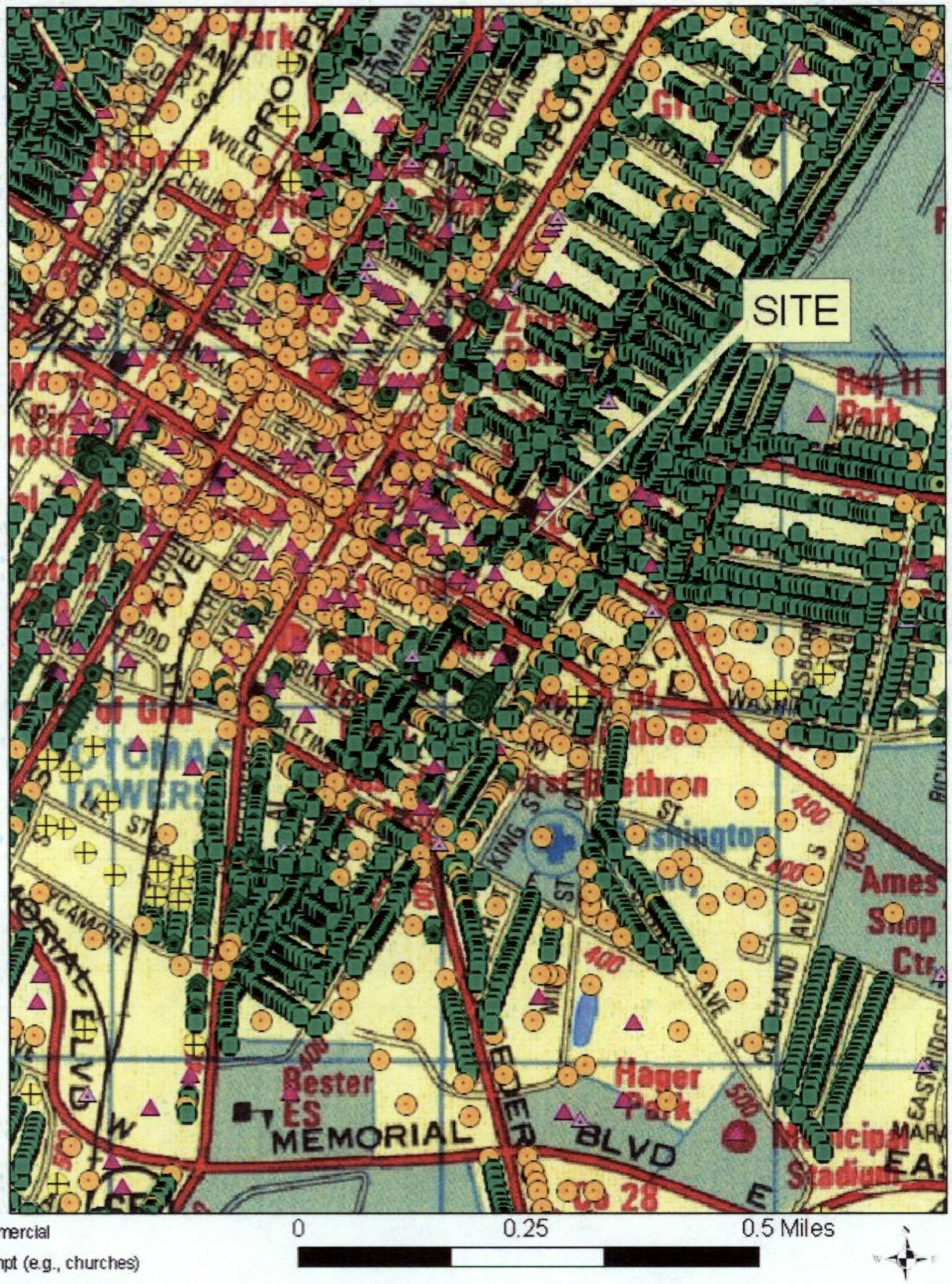
No confirmed incidents of air contamination were documented at the former Anderson Co. dry cleaner site.

An estimated population of 74,195 people resides within a four-mile radius of the site as shown in Table 3.

Table 3 Population Distribution Within a 4-Mile Radius

Ring Distance from the Site (Miles)	Estimated Population
0 – 0.25	1,780
0.25 – 0.50	4,744
0.50 – 1	10,984
1 – 2	24,272
2 – 3	18,589
3 - 4	13,826
TOTAL	**74,195**

Figure 11 Vicinity Land Use



Legend

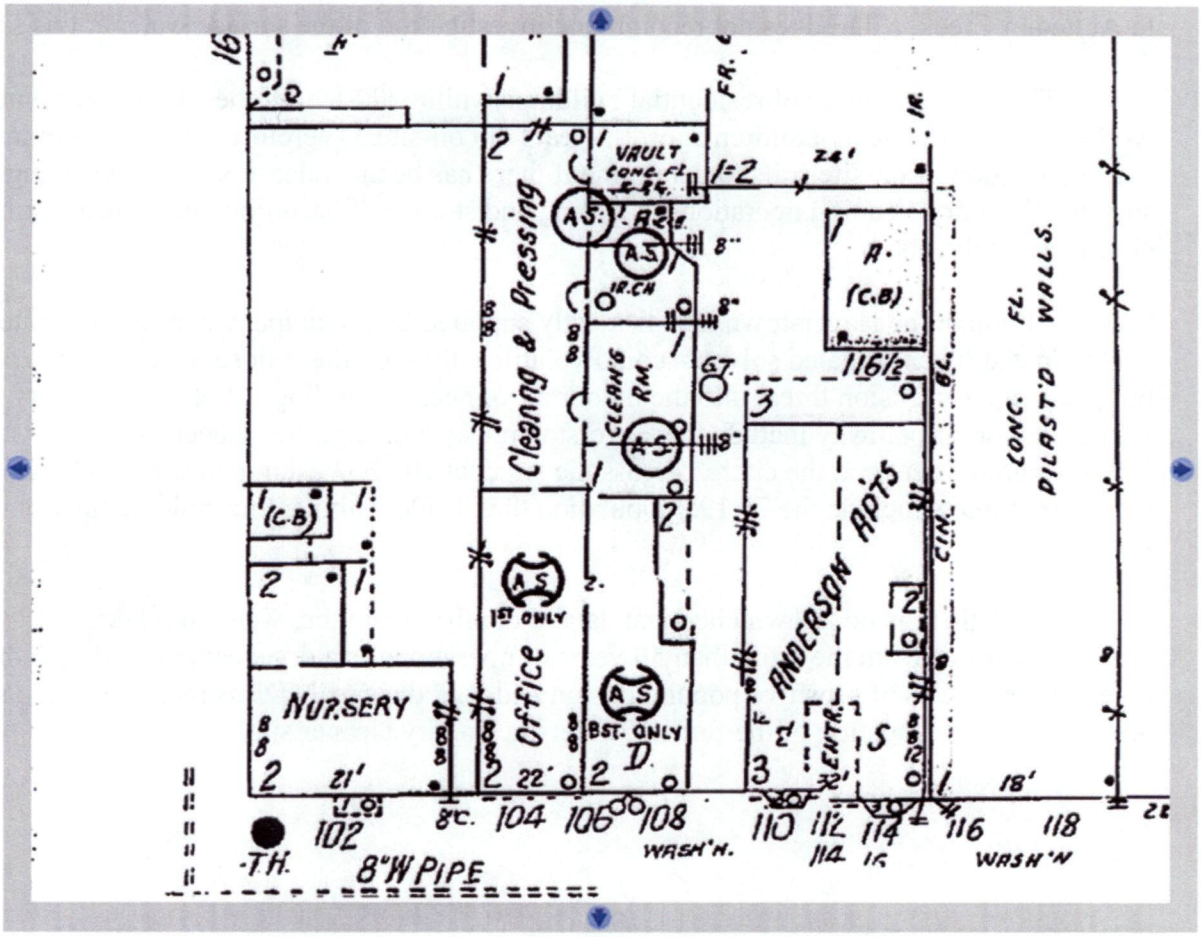
- Commercial
- Exempt (e.g., churches)
- Exempt Commercial
- Industrial
- Apartments
- Residendial
- Residential Commercial
- Residential Condominium

4.0 WASTE DESCRIPTION

The EPA EnviroMapper database does not list any generators within the geographic area that was the former Anderson Co. site. The site currently does not generate, treat, store or dispose of hazardous or solid waste. Since the site operated as a dry cleaner, the potential of a release(s) of hazardous wastes exists due to the former operations, handling and storage of dry cleaning solvents.

Figure 12 Cropped Sheet 4a Sept 1926 Hagerstown Sanborn Fire Insurance Map (revised 1951)

Hagerstown 1926-Sept. 1951, Sheet 4a



5.0 CONCLUSIONS AND RECOMMENDATIONS

Anderson Co. and successors operated a dry cleaning facility at 104-108 E Washington Street from sometime prior to 1951to November 24, 2000. Shortly after the last lessee, We Kare, Inc. went out of business on November 24, 2000, the property was bought by the adjacent Hagerstown Day Nursery on May 1, 2001. According to a telephone conversation with a nearby

business owner, the former dry cleaning facility was razed sometime in 2003. Currently, the Hagerstown Day Nursery utilized the former dry cleaning site as an outdoor playground for the children enrolled at the school. The only regulatory actions for which files exists was for OCP case # 99-1795 on January 25, 1999 for a 500-gallon Varsol tank pull. That file indicated that there was no visual evidence of leakage. However, there was no known soil sampling conducted to confirm the visual observations. There are no other known environmental investigations that have occurred at this site.

Surface water is not used as a potable source in the vicinity of the site; therefore there is no target pathway for drinking water. Levels of contamination in the soil may present the potential for contaminated surface water from the site to flow into Antietam Creek. It is possible that the human food chain and/or sensitive environments would be adversely affected due to surface water from this site. However, given the relative scale of the site and overland distance to Antietam Creek, MDE does not recommend investigation of the surface water at this site.

There are a number of residential buildings within 200-feet of the site in addition to workers and up to twenty children ages 2-5 years old on-site. Therefore, MDE is recommending characterization of on-site soils to determine if there has been a release(s) of dry cleaning solvents from dry cleaning operations, handling and storage of hazardous substances, primarily chlorinated solvents.

Although the Hagerstown area is mostly supplied by municipal water, groundwater contaminated by chlorinated solvents could volatilize through the vadose zone and pose a potential vapor intrusion threat into the indoor air of nearby buildings. Potential primary targets via the indoor air pathway include the Hagerstown Day Nursery, the adjacent apartments at 110 E Washington Street and the church across the street at 101 E Washington Street. Potential secondary targets include the 74,195 population that reside within a four mile radius from the site.

Since there is no known chemical data to confirm that there were no releases of hazardous wastes from the more than 50 years of operations as a dry cleaner and due to the potential exposures of sensitive populations on and near the site, MDE is recommending soil and groundwater investigation of the former Anderson Co. dry cleaner site.

6.0 REFERENCES – ANDERSON COMPANY, INC.

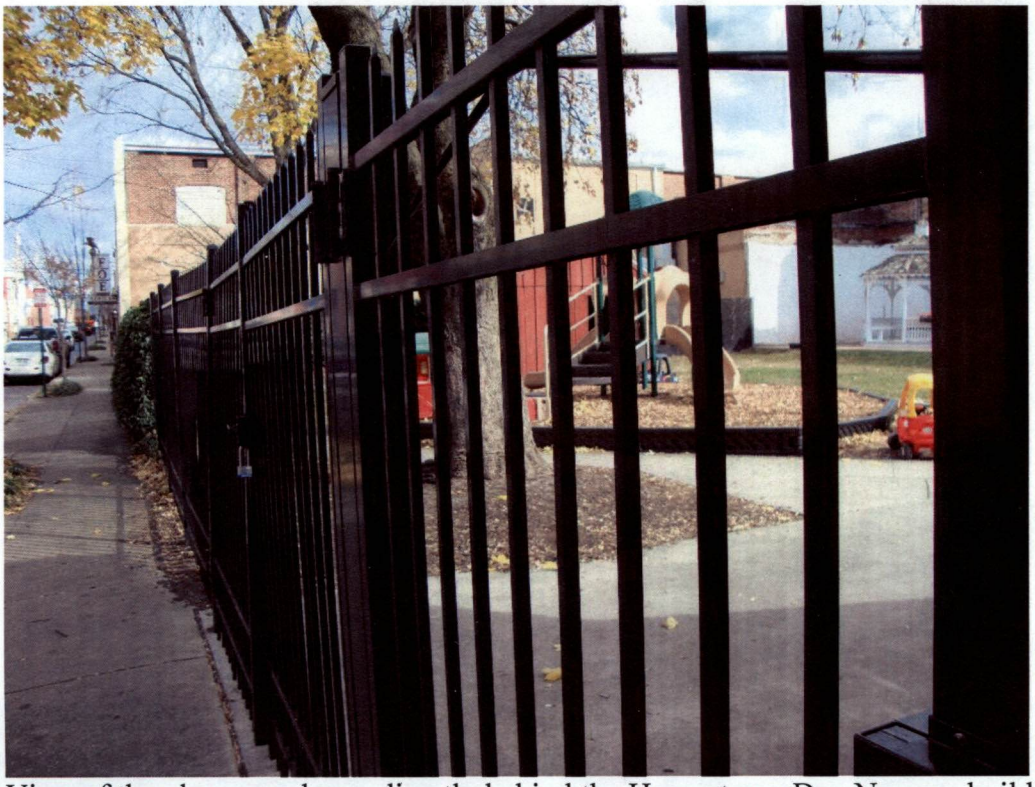
1. Alexandria Drafting Company, Map of Washington County, Maryland. 1996
2. Maryland Department of the Environment - Well Database
3. U.S. Environmental Protection Agency – Enviromapper http://www.epa.gov/enviro.html
4. http://www.i4weather.net/climate.html
5. MDE Land Management Administration Solid Waste Program, Land Restoration Program (LRP) and Geographical Information System files.
6. Maryland Department of Assessment and Taxation, http://www.dat.state.md.us.
7. Maryland Geological Survey, http://www.mgs.state.md.us/
8. http://ocs.orst.edu/pub/maps/Precipitation/Total/States/MD/md.gif
9. http://waterdata.usgs.gov/nwis/annual?referred_module=sw&search_site_no=01619500&format=sites_selection_links
10. http://ofmpub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110038970236
11. http://www.mgs.md.gov/esic/brochures/mdgeology.html
12. http://www.mgs.md.gov/esic/geo/was.html

7.0 PHOTOGRAPHS

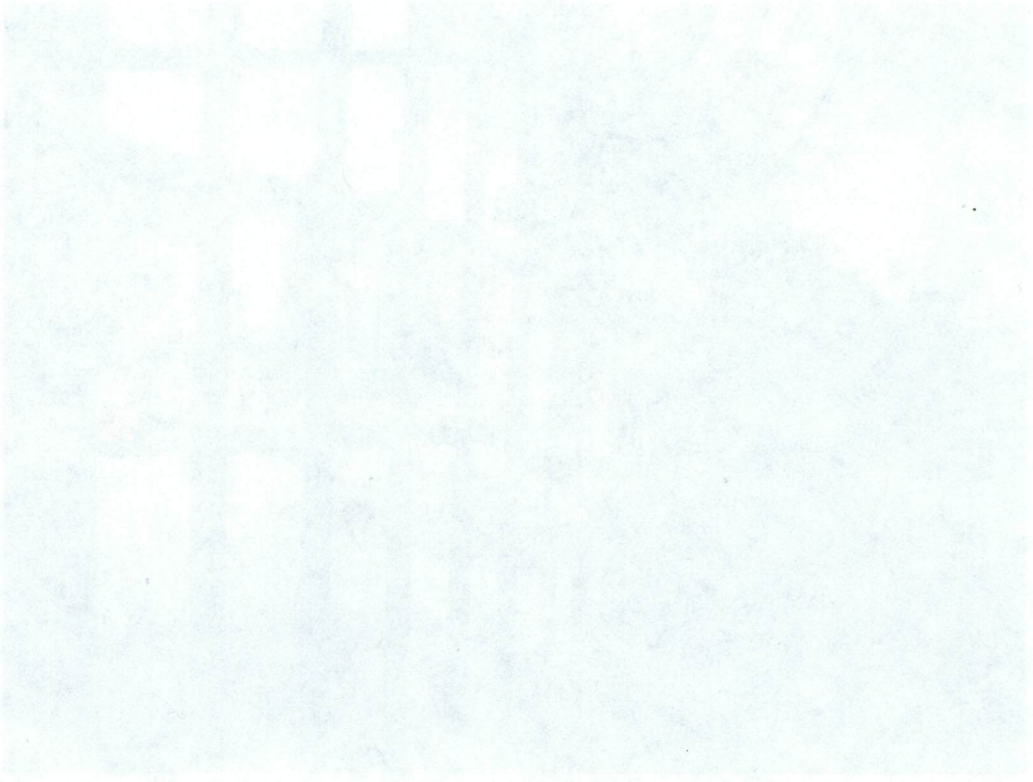
View of the Hagerstown Day Nursery and outdoor playground, facing northeast.

View of the back of the Hagerstown Day Nursery, facing southeast.

View of the playground area and former location of the Anderson Co. dry cleaners, facing south.



View of the playground area directly behind the Hagerstown Day Nursery building along N. Locust St.



MARYLAND DEPARTMENT OF THE ENVIRONMENT
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Secretary

January 22, 2014

Mr. Jan Szaro, Maryland Project Officer
U.S. Environmental Protection Agency
Region III
Site Assessment and Non-NPL Federal Facilities Branch (3HS12)
1650 Arch Street
Philadelphia, PA 19103-2029

Re: Preliminary Assessment Report for the former Anderson Company Dry Cleaners

Dear Mr. Szaro:

Enclosed is the Preliminary Assessment Report for the former Anderson Company Dry Cleaner facility located at 102 E Washington Street in Hagerstown, Washington County, Maryland 21740. If you have any questions concerning this matter, please contact me at (410) 537-3440.

Sincerely,

Phillip Anderson

Phillip Anderson, Project Manager
NPL/Site Assessment Section

PA

Enclosure

cc: Mr. Horacio Tablada
Mr. James Carroll
Ms. Peggy Williams